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Our Reference: SEA-147-D

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thomas R. Tudor and William C. Paetow II

Serial Number: 10/023,333

Filing Date: December 12, 2001

Examiner/Group Art Unit: Fetsuga, Robert M./3751

Title: VISCOUS MATERIAL DISPENSE SYSTEM

APPEAL BRIEF

Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

Please enter the following Appeal Brief in the appeal filed December 16, 2002.

REAL PARTY IN INTEREST

Sealant Equipment and Engineering, Inc., a corporation duly organized and existing under the laws of the State of Michigan and having a principal place of business at 45677 Helm Street, Plymouth, MI 48170.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences in the present application.

STATUS OF CLAIMS

Claim 1 stands rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which is not described in the specification. The phrase "an inner conical nozzle surface extending from the annular shoulder" is asserted to be new matter. Claims 1, 4, 9, and 14 stand rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification. The term "monolithic" in association with the tube member and with the insert is asserted to be new matter. Claims 4, 6, and 21 are rejected under 35 U.S.C. §102(b) as being anticipated by Brennan et al, U.S. Patent No. 6,138,872. Claims 1-6, 8-18, and 20-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Brennan et al, U.S. Patent No. 6,138,872, Keller et

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al, U.S. Patent No. 5,478,150, and Miller, U.S. Patent No. 5,397,180. The language of the current claims on appeal is attached as Appendix A.

STATUS OF AMENDMENTS

All amendments in the present application have been entered except for the After Final Amendment dated December 16, 2002. A Petition from Refusal to Enter an Amendment After Final was filed on February 3, 2003, and no decision has been received.

SUMMARY OF THE INVENTION

A tubular nozzle member or hollow tubular housing 24 has one end for receiving viscous material for passage through the nozzle member. (Paragraph 34.1, line 1). The tubular nozzle member 24 is monolithic or single piece as clearly shown in Figure 9. A tip insert or nozzle insert 16 configured to fit within lower end 24b of tube member 14 with a conical main body portion 16a of the insert positioned within a conical bore 24e defined within the lower end 24b of the tube member with an upper flange portion 16b of the insert seating on a shoulder 24d defined by the tube member 24 at the intersection of the main body portion of the tube member 24 and the lower end 24b of the tube member. (Page 5, paragraph 27). The upper end of tube member 24 defines a large mouth mounting portion 24a and the lower end of the tube member defines a conical nozzle tip portion 24b which is stepped at 24c to allow the tube member to be selectively clipped at a selected step to selectively vary the size of the discharge opening of the tube member. (Page 5, paragraph 26). The monolithic nozzle insert 16 further includes an interchangeable tip insert insertable into the tubular nozzle member, the tip insert having a smaller end aperture than the nozzle tip portion and extending beyond an end of the nozzle tip portion of the tubular nozzle member. (Figures 2 and 8). The nozzle insert 16 has an axially extending passage therethrough with an entry portion of the passage having an angular surface in communication with cylindrical surface extending along at least a portion of the passage. (Paragraph 34.1, lines 19-21). The hollow tubular housing 24 has first end and a second end for carrying viscous material therebetween, and a nozzle retaining surface adjacent one end of the tubular

housing. A nozzle insert 16 is engagable with the nozzle retaining surface within the tubular housing, the nozzle insert 16 having a non-linear axillary extending inner surface defining a passage therethrough with an aperture reduced image adjacent an outlet end for discharging the viscous material from the tubular housing through the nozzle insert 16. (Paragraph 34.1, lines 5-9 and Figure 8).

The nozzle insert 16 has a first aperture at one end and a second aperture at another end. The first aperture can be larger than the second aperture and can be disposed opposite from the nozzle retaining surface of the tubular housing, and a cylindrical passage portion can be located adjacent the second aperture.

(Paragraph 34.1, lines 9-13). A static mixer 14 is operably insertable with the hollow tubular housing 24 for strapping the nozzle insert 16 against the nozzle retaining surface 24d. (Paragraph 34.1, lines 14-15). The nozzle insert 16 has an inner surface with a beveled angular cut adjacent a first end and has a cylindrical surface portion extending longitudinally at least partially between the first end and a second end of the nozzle insert 16. (Paragraph 34.1, lines 15-18).

A monolithic hollow tubular housing 24 having a first end and a second end for carrying viscous material therebetween, and a nozzle retaining annular shoulder surface extending radially inwardly adjacent one end of the tubular housing and a monolithic nozzle insert 16 having a radially outwardly extending annular flange adjacent a first end, the radially outwardly extending annular flange 16b engagable with the nozzle retaining annular shoulder surface 24d within the tubular housing 24. The nozzle insert 16 discharges a viscous material from the tubular housing through the nozzle insert. (Figures 2, 8, and 9). The nozzle insert 16 has a first aperture at one end and a second aperture at another end with the first aperture being larger than the second aperture and being disposed opposite from the nozzle retaining surface of the tubular housing 24 and a cylindrical passage portion adjacent the second aperture. (Paragraph 34.1, lines 10-13). A static mixer 14 is operably insertable within the hollow tubular housing 24 and engagable with the radially outwardly extending annular flange of the nozzle insert 16 against the nozzle retaining surface 24d. (Paragraph 34.1, lines 13-15; and Figures 2 and 8). The nozzle insert 16 has a cylindrical surface

portion extending longitudinally at least partially between the first end and a second end of the nozzle insert 16. The nozzle insert 16 extending beyond the one end of the tubular housing. (Paragraph 34.1, line 18; and Figures 2 and 8). The nozzle insert 16 has an axially extending passage therethrough with an entry portion of the passage having an angular surface in communication with a cylindrical surface extending along at least a portion of the passage. (Paragraph 34.1, lines 18-21). A monolithic tubular member 24 having first and second ends, the second end having an internal insert retaining annular shoulder surface 24d and axillary extending portion of the tubular member interconnecting the first and second ends. A monolithic nozzle insert 16 engagable with the second end of the tubular member and having an outwardly extending annular flange 16b engagable with the annular shoulder 24d within the tubular member 24, the nozzle insert 16 extending outwardly beyond the second end of the tubular member for discharging viscous material. (Figures 2 and 8). The nozzle insert 16 being an interchangeable insert positionable within the second end of the tubular member against the internal inserting retaining surface, the insert having a smaller aperture at the outer end than the second end of the tubular member. (Figures 2 and 8). The nozzle insert 16 has an axially extending passage therethrough, an entry portion of the passage having an angular surface in communication with a cylindrical surface extending along a least a portion of the passage. (Paragraph 34.1, lines 18-21; and Figures 2 and 8). The nozzle insert having a first aperture at one end and a second aperture at another end, wherein the first aperture is larger than the second aperture and is disposed opposite from the insert retaining surface of the tubular stet. (Paragraph 34.1, lines 9-12). A static mixer 14 is operably insertable within the hollow tubular housing 24 for trapping the nozzle insert 16 against the nozzle retaining surface 24d. (Paragraph 34.1, lines 13-15). The nozzle insert 16 has an inner surface with a beveled angular cut adjacent a first end and has a cylindrical surface portion extending along at least a portion of the passage. (Paragraph 34.1, lines 15-18). The nozzle insert being an interchangeable insert positionable within the second end of the tubular member 24 against the nozzle retaining annular shoulder surface 24d, the insert having a

smaller aperture at an outer end than the second end of the tubular member.
(Figures 2 and 8).

ISSUES ON APPEAL

1. Is the phrase "an inner conical nozzle surface extending from the annular shoulder" in claim 1 properly rejected as new matter under 35 U.S.C. §112, first paragraph?

Examiner answers: Yes

Appellant answers: No

2. Is the term "monolithic" in claims 1, 4, 9, and 14 properly rejected as new matter under 35 U.S.C. §112, first paragraph?

Examiner answers: Yes

Appellant answers: No

3. Are claims 4, 6, and 21 properly rejected as unpatentable under 35 U.S.C. §102(b) as being anticipated by Brennan et al?

Examiner answers: Yes

Appellant answers: No

4. Are claims 1-6, 8-18, and 20-22 properly rejected as unpatentable under 35 U.S.C. §103(a) over Brennan et al, Keller et al, and Miller?

Examiner answers: Yes

Appellant answers: No

GROUPING OF CLAIMS

Claims 14 and 17 rise and fall together. The remaining claims 1-6, 8-13, 15-16, 18, and 20-22 stand and fall independently of one another for the reasons stated in detail in the argument.

ARGUMENT

ISSUE 1

In the Office Action dated September 16, 2002, the Examiner rejected claim 1 under 35 U.S.C. §112, 1st ¶, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor, at the time the application was filed, had

possession of the claimed invention. The Examiner specifically objected to the claim reciting in part "an inner conical nozzle surface extending from the annular shoulder". It is submitted that this recitation is shown in Figures 2, 8, and 9 of the drawings. A proposed amendment to the specification was sent as an After Final Amendment to change paragraph [0027] to recite that "a conical external surface or main body portion 16a of the insert positioned within an inner conical nozzle surface or conical bore 24e defined within the lower end 24b of the tube member with an outwardly extending annular flange or upper flange portion 16b of the insert seating on an inwardly extending annular shoulder 24d defined by the tube member at the intersection of the main body portion of the tube member and the lower end 24b of the tube member". On December 31, 2002, the Examiner issued an Advisory Action refusing to enter the proposed After Final Amendment. A Petition from Refusal to Enter an Amendment Pursuant to 37 C.F.R. §1.127 was submitted to request entry of the Amendment After Final filed on December 16, 2002. If the Petition is granted, the entry of the Amendment After Final will render Issue 1 moot. MPEP §608.04 states that "no amendment may introduce new matter into a disclosure of the application, however, in establishing a disclosure, applicant may rely not only on the specification and the drawing that was filed, but also on the original claims if the content justifies it". (Emphasis added). MPEP §2163.06 states "if an applicant amends or attempts to amend the abstract, specification, or drawings of the application, an issue of new matter will arise if the content of the amendment is not described in the application as filed. Stated another way, the information contained in any one of the specification, claims, or drawings of the application as filed may be added to any other part of the application without introducing new matter". (Emphasis added). Since this configuration is shown in Figures 2, 8, and 9 of the drawings, the proposed amendment does not add any new subject matter to the application as originally filed. Therefore, the rejection of claim 1 based on 35 U.S.C. §112, 1st ¶ is improper and is reversible error.

ISSUE 2

Claims 1, 4, 9, and 14 stand rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the

specification in such a way as to reasonably convey to one skilled in the art that the inventors, at the time that the application was filed, had possession of the claimed invention. In particular, the Examiner objects to the term "monolithic" with respect to the tube member 24 and the term "monolithic" with respect to the insert 16. It is submitted that the monolithic, or single piece, configuration of the tube member 24 can best be seen in Figure 9, while the monolithic, or single piece, configuration of the insert 16 can best be seen in Figure 8. Since the monolithic, single piece, configuration of the tube member 24 and insert 26 were shown in the original drawings as filed with the application, paragraphs [0026] and [0027], a proposed After Final Amendment was filed to incorporate this terminology into the specification. On December 31, 2002, the Examiner issued an Advisory Action refusing to enter the proposed After Final Amendment because "the term monolithic is not found in the noted drawing figures." Appellant's attorney notes that the drawing is not required to include the word "monolithic" as stated by the Examiner, rather, it is only required to illustrate the "monolithic" structure. A Petition from Refusal to Enter an Amendment Pursuant to 37 C.F.R. §1.127 was submitted to request entry of the Amendment After Final filed on December 16, 2002. If the Petition is granted, the entry of the Amendment After Final will render Issue 2 moot. MPEP §608.04 states that "no amendment may introduce new matter into a disclosure of the application, however, in establishing a disclosure, applicant may rely not only on the specification and the drawing that was filed, but also on the original claims if the content justifies it". (Emphasis added). MPEP §2163.06 states "if an applicant amends or attempts to amend the abstract, specification, or drawings of the application, an issue of new matter will arise if the content of the amendment is not described in the application as filed. Stated another way, the information contained in any one of the specification, claims, or drawings of the application as filed may be added to any other part of the application without introducing new matter". (Emphasis added). Since the "monolithic" configuration is shown in Figures 8 and 9 of the drawings, the proposed amendment does not add any new subject matter to the application as originally filed. Therefore, the rejection of

claim 1, 4, 9, and 14 based on 35 U.S.C. §112, 1st ¶ is improper and is reversible error.

ISSUE 3

Claims 4, 6, and 21 stand rejected under 35 U.S.C. §102(b) as being anticipated by Brennan et al. Brennan et al discloses a standard static mixer 16, where the static mixer shroud 20 contains mix elements 26 and a cone-shaped insert 12. (See column 2, lines 18-22) Claims 4, 6, 21 of the present application recite a monolithic hollow tubular housing having a first end and a second end for carrying viscous material therebetween, and a nozzle-retaining annular shoulder surface adjacent one end of the tubular housing, and a monolithic nozzle insert engagable with the nozzle-retaining annular shoulder surface within the tubular housing, where the nozzle insert has a non-linear axially extending inner surface defining a passage therethrough with an aperture of reduced dimension adjacent an outlet end for discharging a viscous material from the tubular housing through the nozzle insert. This specific structural configuration is not anticipated, taught or rendered obvious by Brennan et al. The Brennan et al reference does not anticipate, teach, or suggest a nozzle retaining annular shoulder surface adjacent one end of the tubular housing, or a monolithic nozzle insert engagable with the nozzle-retaining annular shoulder surface within the tubular housing. The Examiner refers to the nozzle-retaining annular shoulder surface (as receiving insert 12); however this is a conical surface (not an annular shoulder surface) formed at one end of the static mixer tube housing 16. See column 2, line 3 of Brennan et al. The cone-shaped insert 12 slides through the standard mixer tube 16 and rests against the conical surface formed adjacent the discharge end 18 of the tube 16. The static mixer tube 16 of Brennan et al does not have a nozzle-retaining annular shoulder for receiving an annular flange of a nozzle insert as recited in the claims of the present application. In fact, Brennan et al illustrates that the internal mixer element is received against the annular shoulder of Brennan et al, not the insert itself. This teaches away from the configuration as claimed in the present application. Therefore, Brennan et al does not anticipate, teach, or suggest a static mixer operably insertable within the hollow tubular housing for trapping an annular

shoulder of the nozzle insert against the nozzle-retaining annular shoulder surface. The cone-shaped insert 12 of Brennan et al rests on the inner conical surface of the discharge end 18 of the static mixer tube 16. Claim 6 of the present invention recites the static mixer 14 is operably insertable within the hollow tubular housing 24 for trapping the annular flange 16b of the monolithic nozzle insert 16 against the nozzle-retaining annular shoulder surface 24d of the tubular housing 24. Brennan et al does not anticipate, teach, or suggest trapping the flange of the insert between the mixer element and the nozzle-retaining annular shoulder of the tubular housing as recited in claim 6. Brennan et al does not anticipate, teach, or suggest the nozzle insert being an interchangeable insert positionable within the second end of the tubular member against the nozzle-retaining annular shoulder surface of the static mixer tube as recited in claim 21 of the present application. Brennan et al only teaches that the cone-shaped insert 12 rests against the conical surface 18 formed in the discharge end of the static mixer tube 16. The static mixer tube 16 does not have a nozzle-retaining annular shoulder and the cone-shaped insert 12 does not have an annular flange to rest thereon. Since the cone-shaped insert 12 does not have an annular flange, the insert of Brennan et al cannot be trapped against an annular shoulder of the static mixer tube 16. In fact, Brennan et al teaches away from an annular flange on the insert 12 and teaches away from trapping the annular flange of the insert 12 between the nozzle-retaining annular shoulder surface of the tubular housing and the mixer elements as recited in claims 4, 6, and 21 of the present application. Therefore, the Examiner's rejection of claims 4, 6, and 21 as being anticipated by Brennan et al under 35 U.S.C. §102(b) is improper and is reversible error.

ISSUE 4

Claims 1-6, 8-18, and 20-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Brennan et al, Keller et al, and Miller. The Brennan et al, Keller et al, and Miller references, taken singularly or in any permissible combination, do not anticipate, teach, or suggest the present invention as recited in claims 1-6, 8-18, and 20-22. Brennan et al. discloses a standard static mixer tube 16, where the static mixer shroud 20 contains mix elements 26 and a cone

shaped insert 12. (See column 2, lines 18-22) Claim 1 of the present application recites a monolithic tubular nozzle member having one end for receiving viscous material for passage through the nozzle member, a nozzle tip portion having an inwardly extending annular shoulder with an inner conical nozzle surface extending from the annular shoulder toward an opposite end of the nozzle member, and an axially extending main body tubular portion interconnecting the one end and the nozzle tip portion, the tubular nozzle member having an external surface with radially inwardly stepped reductions in dimension approaching an end of the nozzle tip portion providing guides for selectively cutting variable discharge opening sizes, and a monolithic nozzle insert having an outwardly extending flange adjacent a first end and a conical external surface extending toward a second end, where the annular flange of the nozzle insert is engageable against the annular shoulder of the tubular nozzle member within the tubular nozzle member proximate the nozzle tip portion of the nozzle member and operative for discharging viscous material. This specific structural configuration is not anticipated, taught or rendered obvious by Brennan et al, and/or Keller et al, and/or Miller, taken singularly or in any permissible combination. The addition of the Keller et al reference to Brennan et al does not overcome the deficiencies of the Brennan et al reference previously described in detail. In particular, the Keller et al reference teaches an externally stepped housing, but does not teach a monolithic nozzle insert with an outwardly extending flange engagable with an inwardly extending shoulder of the monolithic tubular nozzle member as recited in claims 1-6, 8-18, and 20-22.

The Miller reference can not be properly combined with either the Brennan et al. reference or the Keller et al. reference, since to do so would destroy the teaching of the multi-part housing inherent in the Miller disclosure. Miller states in column 4, line 44-51, that the dispensing needle assembly 40 includes a hollow cylindrical body 41 preferably formed of metal which is molded within the interior of an outer wing block connector 37 and has a hollow cylindrical dispensing tip 42 extending from the body 41, where the needle body 41 terminates in an outturned top end flange 43 which abuts against an end wall 44 of tapered male luer lock outlet nozzle 45. (Emphasis added). In the

configuration illustrated by Miller, the mixer element 48 is spaced from the top end flange 43 by end wall 44 of nozzle 45. Therefore, the Miller reference does not teach or suggest trapping the flange 43 of an insert (or an insert assembly) against the nozzle-retaining annular shoulder surface with the mixer element as recited in claims 6, 11, and 18 of the present application.

Claim 4 of the present application requires a monolithic tubular nozzle member and a monolithic nozzle insert engagable with a nozzle-retaining annular shoulder surface within the tubular housing, the nozzle insert having a nonlinear axially extending inner surface defining a passage therethrough with an aperture of reduced dimension adjacent the outlet. This specific structure is not anticipated, taught or suggested by the Brennan et al reference, the Keller et al reference, or the Miller reference, taken singularly or in any permissible combination. In particular, the tube 2 of Miller is not monolithic, since it requires connector 37. The tube 2 of Miller does not include an inwardly extending annular shoulder and/or an inner conical nozzle surface for engagement with the nozzle insert as recited in claim 4. The dispensing needle assembly 40 of Miller is not a monolithic nozzle insert as required by claim 4. The dispensing needle assembly 40 of Miller does not have an outwardly extending flange engagable with the inwardly extending shoulder of the monolithic tubular member as recited in claim 4. The dispensing nozzle assembly 40 of Miller does not have a conical external surface extending toward a second end as recited in claim 4.

The Miller reference can not be properly combined with the Keller et al. and/or the Brennan et al. references without destroying the teaching of a multi-part tube inherent in the Miller reference, and/or without destroying the inherent teaching of Keller et al that no insert is required, and/or without destroying the inherent teaching of Brennan et al that the insert does not require an annular flange and the inherent teaching of Brennan et al that the insert is not trapped between the nozzle-retaining annular shoulder surface and the mixer element as recited in the claims of the present application.

The addition of the Miller reference to the combination of Brennan et al in view of Keller et al does not anticipate, teach or suggest a static mixer trapping the nozzle insert against the nozzle-retaining annular shoulder surface as

recited in claims 6, 11 and 18, since Miller teaches that the end wall 44 of the tapered male luer locking nozzle is interposed between the flange 43 and the outlet end 50 of the mixing element 48. (See Fig. 4 of Miller and column 4, lines 48-51 and column 5, lines 2-5).

The dispensing tip 42 of the multi-part dispensing nozzle assembly 40 of Miller is not interchangeable as recited in claims 2, 15, and 21-22. Claim 2 recites that the monolithic nozzle insert includes an interchangeable tip portion insertable into the end of the tubular nozzle member. The Brennan et al. reference does not anticipate, teach or suggest an interchangeable tip portion and/or the tip portion extending beyond the end of the tubular nozzle member. The addition of the Keller et al. reference does not overcome this deficiency. The Keller et al. reference does not anticipate teach or suggest an interchangeable tip portion insertable into the end of the tubular nozzle member. The addition of the Miller reference does not overcome the deficiency of the combination of Brennan et al. and Keller et al. The Miller reference does not anticipate, teach or suggest a monolithic nozzle insert including an interchangeable tip portion insertable into the end of the monolithic tubular nozzle member for the reasons given in detail above. Furthermore, the Miller reference can not be properly combined with the Brennan et al. and/or the Keller et al. references, since the Miller reference teaches away from the requirement of a monolithic tubular nozzle member and there would be no motivation for those skilled in the art to combine the references in the manner asserted by the Examiner. In addition, the proposed combination can not be properly made, since the combination would destroy the teaching of a multi-part tubular nozzle member inherent to the disclosure of the Miller reference, and/or the inherent teaching that inserts are not required in Keller et al, and/or the inherent teaching that inserts do not require an annular flange to be trapped between nozzle-retaining annular shoulder surfaces and the mixer elements as taught by the cone-shaped inserts of Brennan et al.

The Brennan et al reference does not disclose a monolithic nozzle insert having an outwardly extending annular flange engagable against a nozzle-retaining annular shoulder of the tubular housing, and/or a static mixer operably insertable within the hollow tubular housing for trapping the annular

shoulder of the nozzle insert against the nozzle-retaining annular shoulder surface of the tubular housing. The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Keller et al to associate stepped reductions with the Brennan tube member, and to further combine Miller to associate a flange with the Brennan et al insert in order to facilitate securement. The addition of the Keller et al reference to the Brennan et al reference does not overcome the deficiencies of Brennan et al as discussed in detail above. The Miller reference discloses a tube member 2 including a tip insert 40 having a flange 43. However, the insert of Miller is a multi-piece non-monolithic dispensing needle assembly 40 including a hollow cylindrical body 41, a hollow cylindrical dispensing tip 42, and locking connector 37. There is no motivation for combining the multi-piece assembly of Miller with a one-piece insert of Brennan et al. The multi-piece insert assembly of Miller would not slidably fit within the static mixer tube of Brennan et al. The combination of references does not anticipate, teach, or suggest the single piece, monolithic nozzle insert having an annular flange as recited in the claims of the present invention. The Miller reference cannot be properly combined with either the Brennan et al, reference or the Keller et al, reference since to do so would destroy the teaching of the multi-part housing inherent in the Miller disclosure. The combination of Brennan et al, Keller et al, and Miller does not anticipate, teach, or suggest a monolithic nozzle insert that extends beyond the end of the nozzle tip portion of the tubular nozzle member. Miller discloses a multi-piece non-monolithic nozzle insert, and also discloses a multi-piece non-monolithic tube. The mixer tube 2 of Miller requires the attachment of locking connector 37 formed with a tapered upward interior 47 to be assembled together for the mixer to function according to the disclosure.

Claim 2 of the present application recites that the monolithic nozzle insert includes an interchangeable tip portion insertable into the end of the tubular nozzle member and extends beyond an end of the nozzle tip portion of the tubular member. The Brennan et al, reference does not anticipate, teach, or suggest an interchangeable tip and/or the tip portion extending beyond an end of the tubular nozzle member. The addition of the Keller et al, reference does not overcome

this deficiency. The Keller et al, reference does not anticipate, teach, or suggest an interchangeable tip insertable into the end of the tubular nozzle member. In addition, the Miller reference does not overcome the deficiency of Brennan et al, and Keller et al. The Miller reference does not anticipate, teach, or suggest a monolithic nozzle insert including an interchangeable tip portion insertable into the monolithic tubular nozzle member for reasons given in more detail above. Furthermore, the Miller reference cannot be properly combined with Brennan et al, and/or the Keller et al, references since the Miller reference teaches away from the requirement of a monolithic tubular nozzle member and there would be no motivation for those skilled in the art to combine the references in this way. In addition, the proposed combination cannot be properly made, since the combination would destroy the multi-part tubular nozzle member inherent in the disclosure in the Miller reference. Even if, as suggested by the Examiner, the Brennan et al reference discloses a “monolithic” insert, the Miller reference fails to teach an annular flange on a monolithic insert and having a conical surface as recited in the present claims. The Miller reference teaches in Column 4, lines 44-48, that dispensing needle assembly 40 includes a cylindrical body 41, and a hollow cylindrical dispensing tip 42 extending from the body 41.

Claim 3 recites that the monolithic insert has an inner surface entry point with an angular cut funnel shaped surface portion and a cylindrical surface portion. The Brennan et al reference does not anticipate, teach or suggest this specific structural configuration, since it only discloses a conical inner surface. The addition of Keller et al does not overcome this deficiency, since Keller does not disclose the use of any insert. The further addition of Miller does not overcome the deficiency of the combination of Brennan et al and Keller et al, since Miller does not disclose a monolithic insert with the claimed configuration. There is no teaching or suggestion of combining the references as suggest by the Examiner, except for the disclosure of the present invention itself.

Claim 5 recites that the monolithic insert has a cylindrical passage portion adjacent the second aperture. The Brennan et al reference does not anticipate, teach or suggest this specific structural configuration, since it only discloses a conical inner surface. The addition of Keller et al does not overcome

this deficiency, since Keller does not disclose the use of any insert. The further addition of Miller does not overcome the deficiency of the combination of Brennan et al and Keller et al, since Miller does not disclose a monolithic insert with the claimed configuration. There is no teaching or suggestion of combining the references as suggest by the Examiner, except for the disclosure of the present invention itself.

Claims 8, 13 and 20 recite that the monolithic insert has an inner surface with an beveled-angular cut adjacent a first end and a cylindrical surface portion extending longitudinally at least partially between the first end and a second end of the insert. The Brennan et al reference does not anticipate, teach or suggest this specific structural configuration, since it only discloses a conical inner surface. The addition of Keller et al does not overcome this deficiency, since Keller does not disclose the use of any insert. The further addition of Miller does not overcome the deficiency of the combination of Brennan et al and Keller et al, since Miller does not disclose a monolithic insert with claimed configuration. There is no teaching or suggestion of combining the references as suggest by the Examiner, except for the disclosure of the present invention itself.

Claim 10 recites that the monolithic insert has a cylindrical passage portion extending longitudinally adjacent the second aperture of the insert. The Brennan et al reference does not anticipate, teach or suggest this specific structural configuration, since it only discloses a conical inner surface. The addition of Keller et al does not overcome this deficiency, since Keller does not disclose the use of any insert. The further addition of Miller does not overcome the deficiency of the combination of Brennan et al and Keller et al, since Miller does not disclose a monolithic insert with claimed configuration. There is no teaching or suggestion of combining the references as suggest by the Examiner, except for the disclosure of the present invention itself.

Claims 12 and 14 recite that the monolithic insert extends beyond the one end of the tubular housing. The Brennan et al reference does not anticipate, teach or suggest this specific structural configuration, since it only discloses a cone-shaped within the end of the static mixer tube. The addition of Keller et al does not overcome this deficiency, since Keller does not disclose the

use of any insert. The further addition of Miller does not overcome the deficiency of the combination of Brennan et al and Keller et al, since Miller does not disclose a monolithic insert meeting the limitations of the claimed configuration. There is no teaching or suggestion of combining the references as suggest by the Examiner, except for the disclosure of the present invention itself.

Claim 16 recites that the monolithic insert has an entry point of the passage with an angular surface in communication with a cylindrical surface extending along at least a portion of the passage. The Brennan et al reference does not anticipate, teach or suggest this specific structural configuration, since it only discloses a conical inner surface. The addition of Keller et al does not overcome this deficiency, since Keller does not disclose the use of any insert. The further addition of Miller does not overcome the deficiency of the combination of Brennan et al and Keller et al, since Miller does not disclose a monolithic insert meeting the limitations of the claimed configuration. There is no teaching or suggestion of combining the references as suggest by the Examiner, except for the disclosure of the present invention itself.

Therefore, the Examiner's rejection of claims 1-6, 8-18, and 20-22 under 35 U.S. C. §103(a) based on the combination of Brennan et al, Keller et al, and Miller is improper and is reversible error.

CONCLUSION

At best, the prior art references show components in bits and pieces of the inventive arrangement as claimed in the independent claims. The relevant art recognizes many components and concepts within its domain. Upon close investigation and scrutiny of the diverse practices in this art and its peripheral technical fields of endeavor, a fact-finder is inevitably led to the conclusion that artisans can and could produce a myriad of devices and functions of apparently endless diversity from components and concepts already individually recognized as belonging to the prior art. Such speculation must not cloud the standards for the evaluation of patentability over the prior art under 35 U.S.C. §§102 and 103. Properly focused, the issues center on what would have been anticipated, or obvious to one of ordinary skill in the art at the time of the invention. Obviousness is tested by what the combined teaching of the references would

have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). But it cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. See ACS Hosp. Sys. Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). And teachings of references can be combined only if there is some suggestion or incentive to do so. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596, 1599 (Fed. Cir. 1988). Approaches to obviousness determinations which focus merely on identifying and tabulating missing elements in hindsight retrospect imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, and, fall victim to the insidious effect of hindsight syndrome wherein that which only the inventor taught is used against its teacher. W. L. Gore & Assoc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 312-3 (Fed. Cir. 1983). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. In re Fine, 5 USPQ2d, at 1600.

For the reasons stated above, it is respectfully submitted that Appellants' invention as set forth in claims 1-6, 8-18, and 20-22 patentably define over the cited references. As such, it is respectfully submitted that the Examiner's final rejection of the claims 1-6, 8-18, and 20-22 is erroneously based and the reversal of the objections of claims 1-6, 8-18, and 20-22 is respectfully requested.

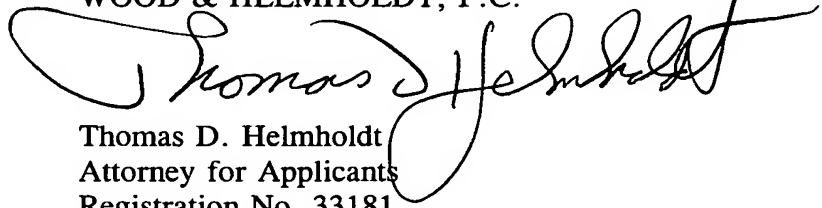
Applicants attorneys check in the amount of \$130.00 is enclosed to cover the Appeal Brief filing fee.

No oral hearing is requested.

This Appeal Brief is being filed in triplicate including one original and two copies.

Respectfully submitted,

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Date: February 18, 2003
TDH/MDF/amt/rrn

Appendix A

1. (Amended) An apparatus for dispensing a viscous material comprising:

a monolithic tubular nozzle member having one end for receiving viscous material for passage through the nozzle member, a nozzle tip portion having an inwardly extending annular shoulder with an inner conical nozzle surface extending from the annular shoulder toward an opposite end of the nozzle member, and an axially extending main body tubular portion interconnecting said one end and the nozzle tip portion, the tubular nozzle member having an external surface with radially inwardly stepped reductions in dimension approaching an end of the nozzle tip portion providing guides for selectively cutting variable discharge opening sizes; and

a monolithic nozzle insert having an outwardly extending annular flange adjacent a first end and a conical external surface extending toward a second end, the annular flange of the nozzle insert engagable against the annular shoulder within the tubular nozzle member proximate the nozzle tip portion of the nozzle member and operative for discharging viscous material.

2. (Amended) The apparatus of claim 1, wherein the monolithic nozzle insert further comprises an interchangeable tip insert insertable into the tubular nozzle member, said tip insert having a smaller end aperture than the nozzle tip portion and extending beyond an end of the nozzle tip portion of the tubular nozzle member.

3. The apparatus of claim 2, wherein the tip insert has an inner surface with an entry point having an angular cut funnel shaped surface portion and a cylindrical surface portion.

4. (Amended) An apparatus for dispensing a viscous material comprising:

a monolithic hollow tubular housing having a first end and a second end for carrying viscous material therebetween, and a nozzle-retaining annular shoulder surface adjacent one end of the tubular housing; and

a monolithic nozzle insert engagable with the nozzle-retaining annular shoulder surface within the tubular housing, the nozzle insert having a non-linear axially extending inner surface defining a passage therethrough with an aperture of reduced dimension adjacent an outlet end for discharging a viscous material from the tubular housing through the nozzle insert.

5. The apparatus of claim 4 further comprising:

the nozzle insert having a first aperture at one end and a second aperture at another end, wherein the first aperture is larger than the second aperture and is disposed opposite from the nozzle-retaining surface of the tubular housing, and a cylindrical passage portion adjacent the second aperture.

6. The apparatus of claim 4 further comprising:

a static mixer operably insertable within the hollow tubular housing for trapping the nozzle insert against the nozzle-retaining surface.

7. Canceled.

8. The apparatus of claim 4 further comprising:

the nozzle insert having an inner surface with a beveled-angular cut adjacent a first end and having a cylindrical surface portion extending longitudinally at least partially between the first end and a second end of the nozzle insert.

9. (Amended) An apparatus for dispensing a viscous material comprising:

a monolithic hollow tubular housing having a first end and a second end for carrying viscous material therebetween, and a nozzle-retaining annular

shoulder surface extending radially inwardly adjacent one end of the tubular housing; and

a monolithic nozzle insert having a radially outwardly extending annular flange adjacent a first end, the radially outwardly extending annular flange engagable with the nozzle-retaining annular shoulder surface within the tubular housing, the nozzle insert for discharging a viscous material from the tubular housing through the nozzle insert.

10. The apparatus of claim 9 further comprising:

the nozzle insert having a first aperture at one end and a second aperture at another end, wherein the first aperture is larger than the second aperture and is disposed opposite from the nozzle-retaining surface of the tubular housing, and a cylindrical passage portion adjacent the second aperture.

11. The apparatus of claim 9 further comprising:

a static mixer operably insertable within the hollow tubular housing and engagable with the radially outwardly extending annular flange of the nozzle insert for trapping the nozzle insert against the nozzle-retaining surface.

12. The apparatus of claim 9 further comprising:

the nozzle insert having at least a cylindrical surface portion of a passage extending axially therethrough with a first opening adjacent one end larger than a second opening adjacent an opposite end, and the nozzle insert extending beyond the one end of the tubular housing.

13. The apparatus of claim 9 further comprising:

the nozzle insert having an inner passage with a beveled-angular cut surface adjacent a first end and having a cylindrical portion extending at least partially between the first end and a second end of the nozzle insert.

14. (Amended) An apparatus for dispensing a viscous material comprising:

a monolithic tubular member having first and second ends, the second end having an internal insert-retaining annular shoulder surface, and an axially extending portion of the tubular member interconnecting said first and second ends; and

a monolithic nozzle insert engagable within the second end of the tubular member and having an outwardly extending annular flange engagable with the annular shoulder within the tubular member, the nozzle insert extending outwardly beyond the second end of the tubular member for discharging viscous material.

15. The apparatus of claim 14 further comprising the nozzle insert being an interchangeable insert positionable within the second end of the tubular member against the internal inserting-retaining surface, the insert having a smaller aperture at an outer end than the second end of the tubular member.

16. The apparatus of claim 14 further comprising the nozzle insert having an axially extending passage therethrough, an entry portion of the passage having an angular surface in communication with a cylindrical surface extending along at least a portion of the passage.

17. The apparatus of claim 14 further comprising:
the nozzle insert having a first aperture at one end and a second aperture at another end, wherein the first aperture is larger than the second aperture and is disposed opposite from the insert-retaining surface of the tubular member.

18. The apparatus of claim 14 further comprising:
a static mixer operably insertable within the tubular member for trapping the nozzle insert against the internal insert-retaining surface.

19. Canceled.

20. The apparatus of claim 14 further comprising:

the nozzle insert having an inner passage with a beveled-angular cut portion adjacent a first end and having a cylindrical portion extending along at least partially between the first end and a second end of the nozzle insert.

21. (New) The apparatus of claim 4 further comprising the nozzle insert being an interchangeable insert positionable within the second end of the tubular member against the nozzle-retaining annular shoulder surface, the insert having a smaller aperture at an outer end than the second end of the tubular member.

22. (New) The apparatus of claim 9 further comprising the nozzle insert being an interchangeable insert positionable within the second end of the tubular member against the nozzle-retaining annular shoulder surface, the insert having a smaller aperture at an outer end than the second end of the tubular member.



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Our Reference: SEA-147-D

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thomas R. Tudor and William C. Paetow II
Serial Number: 10/023,333
Filing Date: December 12, 2001
Examiner/Group Art Unit: Fetsuga, Robert M./3751
Title: VISCOUS MATERIAL DISPENSE SYSTEM

CERTIFICATE OF MAILING AND TRANSMITTAL LETTER

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Washington, DC 20231

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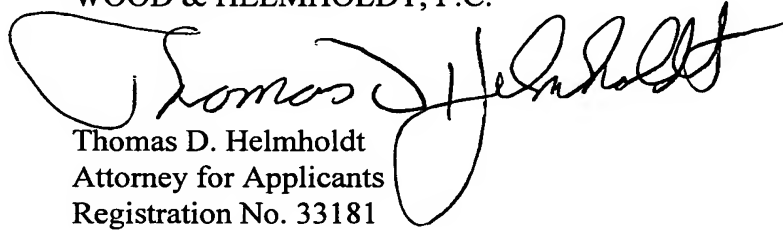
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Respectfully submitted,

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